1983

UNITED STATES
DEPARTMENT OF THE INTERIOR

DI-6

APPROVED [illegible]

JUNE 5, 1983

MARTHAS VINEYARD

5 MORAINES

GAY HEAD

Merchantville

MAGOTHY
RARITAN

83-1a GAY HEAD CLIFFS

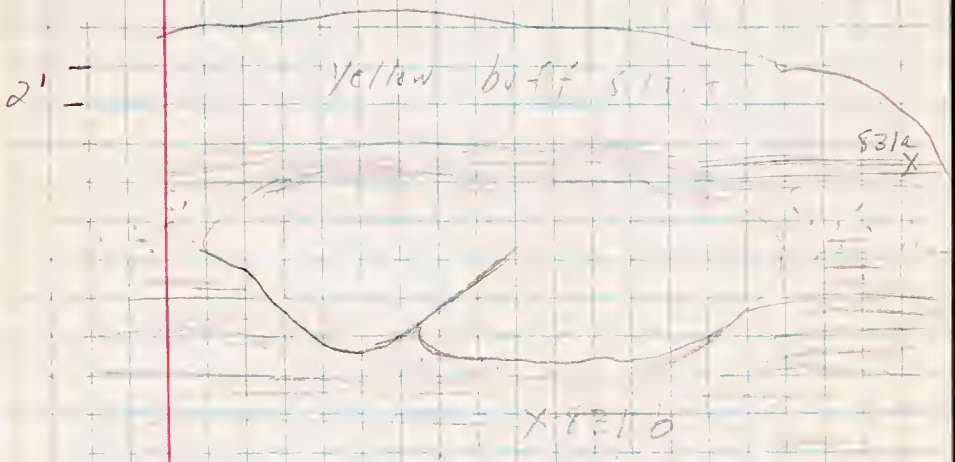
83 ~~83~~ 1a Pollen SAMPLE from
DARK GREY SILTY CLAYSTONE
W/ signs of movement
SLICKENSIDES.

IN Cliff on N side of
W. facing valley
about 200 ft W of
GAY HEAD LIGHT

~~at~~ on N side of a
~~a~~ AMPHITHEATER shaped
slump VALLEY

30' below top of Cliff
100' above Tide

83 1b From LIGNITIC CLAY abT 4'
Thick 10' below ~~the~~ 83 1a
below a SS lens



b

sidewise nodules
at base of outcrop

6/5/83

Bogers Pit on
Indian Hill Road

83-2

N. side of Pit Merchantville
Thrust over precast

~~Black~~
DARK Grey clay in wood
Merchantville ?
laterally decomposed sand

6/5/83

831d Beach toe of lignite slide, at beach level

Magothy

interbedded sand, clays + red beds

836 Chilmark Town Dump
E. of Harbor Road

K - white ss.

Some glacier drift

537 W Ocean

Pebbles [illegible]

Coarse screened
[illegible] Chin
[illegible]
[illegible]

Heavy sands

Shell [illegible]

Sec [illegible]
[illegible] x [illegible]
[illegible] [illegible]
Mucrone & K.

Mollusks & phosphate nodules
[illegible] Sta [illegible]
[illegible] [illegible]

Calc [illegible] & [illegible]
x bedded yellow
brown limonite
Cemented quartz
Sand

837 Cont

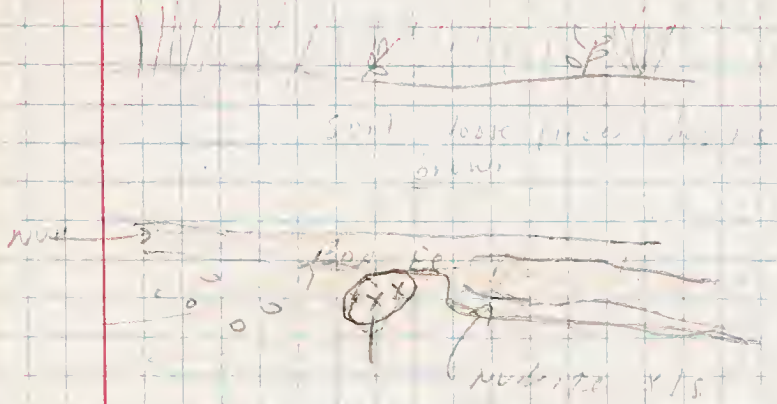
Some places greensand
overlies it

837a [illegible] Leaf in nodule from the
Raritan ? Magothy ?

837 b Nodules

837 c Grey clay at
beach level
50' ft SE of 837b

837 d Bog iron ore
[illegible]
[illegible] acicular [illegible]
[illegible]
[illegible] the [illegible]
[illegible]
[illegible] in it.



6/27/83

838 Morales T. & Iridium Hill
Site

Hell Creek & Tullock Fms.
very distinct palynologically

H.C. 12 spec. Aquila
& others
Diverse pollen flora
Very homogeneous

Tullock. Trans. Assembl.
no great abundance
of the dominant pollen
types

Trans Assembl. appears
to be homogeneous

At Herpe Junk NE which lies
S of
Bdy of Fm. & Cretaceous

6/27/83

Bob

Magnetics.

KT Bay in San Juan Island
(very active
(Reversed between 29 & 30
normal reversed

Reversed polarity between 21 & 30
no Recent reversal - be
present here in coal.

LAST reversal about 60'
feet above Jones 2

Reversal is at base of
Lebo.
At Ir. Hill
Ir. is between 29 & 39
in reversed

In Billy Creek
basal Lignite falls in
a normal which
would be N 30?

6/27/83

639 Hell Hollow

White SS Channel

Ir IN a lower Z lignite

above White SS Channel

~~IN Hell~~ Creek

Worm Coulee

Upper White SS Channel

lies Between upper

& lower Z

Yellow Channel ← [illegible]

Lower

[illegible]

839

Dx.

Lower Z Coal w/

Crazy layer

SS

4IN

lignite Asaro has Ir from this

shale vert. charcoal bn. roots

lign. w Crazy layer,

1r. 1.1 2n. DX

6/27/83

8310 Billy Creek
Same as at last loc.
of last year.

Tonstein at base of
the lignite
will be tested for Ti

Ti enriched in the
bdy layer.

This lignite begin
N 30
which would make it
older than at Ir Hill

8312a - Pterarxmpha crassifolia
Nelumbium mentanum

This is Paleocene!

2 m above lowest coal
at 8310
in Tullock

6/28/83

Trumbo Ranch Quad

1 1/2 mi South of
R311 Brownie Butte
NW NW, Sec 9, T20N, R [illegible] W.
W Lignite or big Dirty Lig
[illegible]

[illegible] & Stutter

Bug of Tert Volc, abt
80 miles to west
are probable source

Numerous ash partings in
the coal seams are
all Tuff

All

R311 1 1/2 mi S. of Brownie Butte
NW 1/4, NE 1/4, NE 1/4, Sec. 9, T. 20 N.
R. 37 E, Garfield Co., MONT.

Trumbo Ranch 7 1/2' Quad.

6/28/83

8312 1/8 mi SE of Brownie Butte in cliff face
Center, S line, SE 1/4 Sec. 31, T 21 N, R
37 E, Garfield Co, Montana
Trumbo Ranch 7 1/2' Quad.

Reversed polarity 30-40' below
2 coal & 60-80' above 2 coal.

Normal at W coal

Paleomag. data at Billy Creek
was paper but properly
matched
There are at least 50'
of reversed section
below the first lignite

Lower section at Billy Creek
units now close match

Bentonite 60-70' layer 2
x' tuff in upper 2

[illegible] hill section
match up w Brownie
Butte

Flora: Paranymphaea crassifolia
Widdringtonites sp.
Sequoia langsdorfii
Nelumbium montanum
Vitis olrikii
Celastrus taurinensis
Ampelopsis acerifolia

6/28/83

E. of Brownie Butte Ranch Place
8313 SW 1/4, SE 1/4, Sec 32, T21N, R 37E.
Garfield Co., Mont. Trumbo Branch 7 1/2' Quad

At Brownie Butte
Z Coal

lower Z w a tonstein at the base I
Tr anomaly in ~~[illegible]~~ clay at base K in coal

1T grey ss - (Channel)

grey clay

lignite

clay (tonstein)

Bob Tschudy 7 ET J
Aquilapollenites &
Proteacidites.
in clay & coal
Fern spores T smooth
Tricolpates ~~[illegible]~~ in grey
clay at top

K/T Bdy - Catastrophe

This site contains
Shocked Qtz in the base
Beta Qtz
Zircon - spherical Kaolinite
& Smectite

5313 (cont'd)

55 is part of a channel
[illegible]

Fossil leaves

Osmunda
Averrhoites affinis

There are good lvs of
possible Averrhoites
in the shales
above the coals

8314 = 8220 Again

Lowest Coal in this
section is not the
KIT Bly Flor
Transitional Flora 10 cm
below
1 above
There is a very thin layer
below the lignite which
may cut out the
coal layer 2
very rated Tullian above

Dinosaur Bone perhaps 2½ ft
lower

Bright Orange ash layer
1½ ft. above lignite

Good plants in Vertical
roots 5 m above
first lignite in
Zone 8 B pe

Pennsylvanian
Cordaites plants
Sigillaria
Fern Sphenopteris

ESIS Lerbekmo Broadspan Site

Cool with crazy clay
in middle & clear
sunshine vis at site
etc

Correlated with upper 2 m
of M.H.

Horizon Bryant
get basins per bed

Sol. [illegible]
[illegible]
[illegible]
[illegible]

[illegible]

[illegible]

[illegible]

Actual time to h = half
a mean rate of 16 m/m

8316 Bear Creek Helen Michael Site #1
Gulf Stage Sec. 10

Jackson Formation
Meyersville Int.

Approximately
[illegible] below basal lignite
[illegible] above lignite
to TRANSITIONAL [illegible]

Above lignite [illegible]
[illegible] little [illegible]
Capped by a [illegible]

Highest [illegible]
[illegible] Sand
[illegible]

~~Top Set~~

30' above basal lignite
Concretionary in
Vergated [illegible]

Cut

8316.B [illegible] Channel Below top
[illegible] lignite
B/ 3' Yellowish [illegible]
[illegible] Some [illegible] gall
[illegible]

831 6 pCi/cm²

Basal

* Level of Drawing phase
25 [illegible]

SIN [illegible] Lymphoid

* SIN [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

P

[illegible]

PX at [illegible]
[illegible]

[illegible] b [illegible]
[illegible]
[illegible] paper brown 1" [illegible]
[illegible] at base

[illegible] c = [illegible] from
[illegible] clay [illegible] [illegible]
[illegible]
immediately above [illegible]
Cock [illegible]

AT base of [illegible] is
[illegible] [illegible] Crox Class
as a basal ~~[illegible]~~ [illegible]
[illegible]
Crazy layer

8317 Bug Trap 036

Channels at Bug
Creek [illegible]

Poor correlation [illegible]
Channel [illegible]

[illegible]

[illegible]

Lowell Correlation [illegible]
here [illegible] 82

0318 Big Cr. Ave Hills Quarry

[illegible]

[illegible]

[illegible]

[illegible]

A shot [illegible] of [illegible]
[illegible]
[illegible]

8319 Seven Blackfoot Creek
[illegible] Sec 33
T 21 N, R 34 E Garfield Co
[illegible]

Turlock at top w/
upper 2 Coals
Lt ash w/ pinkish
[illegible]

8319a Grey Shales 2m below
Upper 2
Roots & rushes grey

6/29/83

1320 [illegible] Chalk Butte Quad.

Base of Tullock marked
by lignite w. ash
layer 1½' thick
Above this is a grey
channel ss w. xbeds
rusty cemented edges
and fluted erosional
profile. To 40' thick.

Tschudy sample no
~~0 34-28K~~ in
This pulley is where is Tschudy's
below. The lignite are sect.
Channels in the
Dinos in channels below.

16 feet below the lignite
K in [illegible]
clay
Paleocene pollen in lignite
underlain by lignite
w. Dermatophyta

[illegible] Below what we thought
to be lowest lignite
is another lignite w
what were shoemaker

6/20

8320

Believes is a Tonstein
if in lowest 2 at
Hopper Junk.

40' Grey xbedded ss
w Fluffy
& Rusty Crinoidal
Cones

Yellow ss

Px 3½
4" 11½

Light

← Paper brown sh - 8320b
grd Grey w plants - 8320a

SS Yellow

Grey clay ss stain

← D32-74K Tschotyns
Lyn. w
Crazy layer

Px 10-11

Charnels

8320 c Crazy Layer Bentonite
Lowest highest

8320 a Grey Clay w/ [illegible]

Paramorphic

8320 b 500 yards N of this loc
Brown shale w/
Cerebrospirillum.

Pit 8-9 Lignite above lowest
[illegible] lowest Lignite
w Green layer

7/1/83

8313 "RICKS PLACE" e of Brownie Butte
about 1/2 mile, SW 1/4, SW 1/4, Sec 32, T 21N,
8313 R 37 E. Garfield Co., Mont.

Trumbo Ranch 7 1/2'
Qual.

Again

WIL UTTER
Marisol Montellano
ZHEXI LUO 罗哲西

Flora 1-3" above basal
Jr lignite

Osmunda
cf Averrhoites affinis but
it is more regular

7/5/83

8321 = 8211 of last year

RC sampling at 2 cm intervals for pollen + IR + Jon Stein.

W. L. Utter & K. Johnson

Section sampled in IR trench dug last year.

Section starts at top of unctious dusky black grey clay 5Y 2/2 to Sect 8211

Clay is ~~coal~~ light thicker & thin so measurements differ somewhat from last year

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Road to Dumbell Hill at top of escarpment just where road comes off Polecat Bench - east side of road 1130 m e of SW corner, 340 m n. of SE. Corner of Sec 31, T5TN, R.98W, Park Co., Wyo. Denver Reservoir Quad.

7/5/83

8321

BASE of SECTION STARTS
in a CLAY bed at ~~0.04m~~
0 cm ~~in a~~
~~He~~ LANCE Fm.

0 CLAY, UNCTUOUS, DUSKY
dark grey, carbonaceous
(5 Y 2/2 0) SLICKENSIDED
CLAY THAT looks as
if it is an UNDERCLAY
Becomes darker & more
carbonaceous in upper
3 cm. Some limonite
& JAROSITE on JOINTS.

4 cm - STRINGER of dark
grey carbonaceous
CLAY pinching & swelling
& merging w/ the
lignite 46 cm North

5 cm LENS of med grey MUDST,
w CARB. ROOT impressions
Thins TO 0 - 40 cm N &
50 cm S where IT
is replaced by lignite

8.5 FORT UNION Fm.
LIGNITE, BLOCKY, BLACK
LIMONITE STAINING ON

7/5/83

8321 (cont'd)

faces of Clents
Thickens & thins irreg
vrlx but is lnt'l
Continuous
10 cm Thick 215 cm d
4 cm 30 - 50 cm S

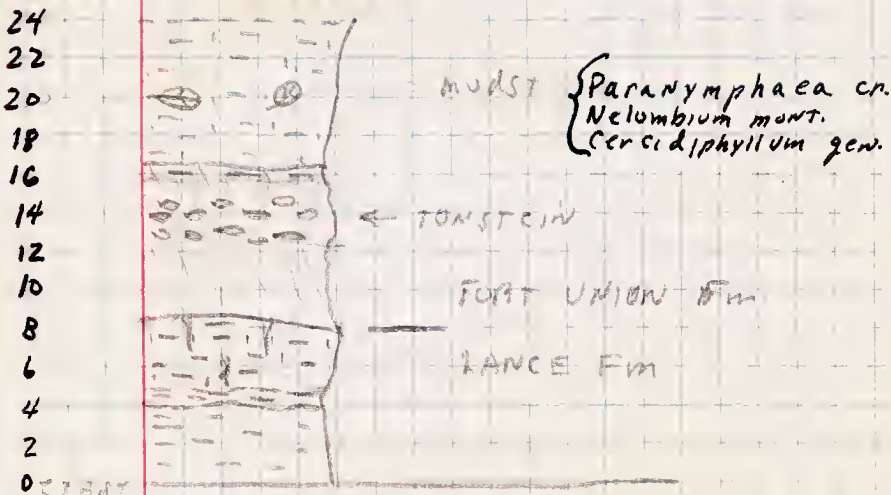
12.5 cm Fragmental Clay Rock
rounded & flattened
pinkish grey clay clasts
embedded in lignitas
from 0.3-0.6 cm below (muscovite on incl wall)
14.7 Lignite w ND ECR
15.7 Brown lignite &
lignitic paper shale
w gypsum xl crusts ∥ to
bedding planes
16.4 mrdst med yellowish grey
lignitic stained
irreg parallel bedded
abt'l 1.5-3 cm thick
w vert roots
plants 315-410 cm
above lignite

Comment Paraxymphaea crassifolia
Cercidiphyllum genetrix
Nelumbium montanum
at 8321 (3) which
24 cm Top of Special Sec, as mea

7/5/83

6321

SECTION AT 6321



at 8321 (3) 30' South

pix

16 Tonstein layer at 8321 exposed on flat surface and on vertical face

17 same but a distance showing underlying siltstone and overlying channel sand

18 Tonstein seam - same level as roof of hammer

19 closeup of horizontal bedding plane of the tonstein layer

Sec 8321 (2) yes 50' to the south (up dip)

7/6/83

8322 "Grimy Gulch" ~~[illegible]~~ Head of Little ~~Polecat~~ Creek. Center, N line, NE 1/4, NE 1/4, NE 1/4 Sec 2, T 56 N, R 99 W, Park Co. Wyo. Garland 7 1/2' Quad.

LITER = K. Johnson

Samples from a lignite underlying the plant producing SITSTS. + SS. of Grimy Gulch loc.

Section begins in carbonaceous slicked. under ~~[illegible]~~ mudst. of coal seam

Cm.

0 Base of section. Brownish grey, slickensided carb mudst.

8. ~~Co~~ Lignite BLACK cleated.

46 CLAY, brownish BLACK, carbonaceous slickensided

53 Becomes med grey ~~bedd~~ grey 11 bedded ~~SITST~~ mudst

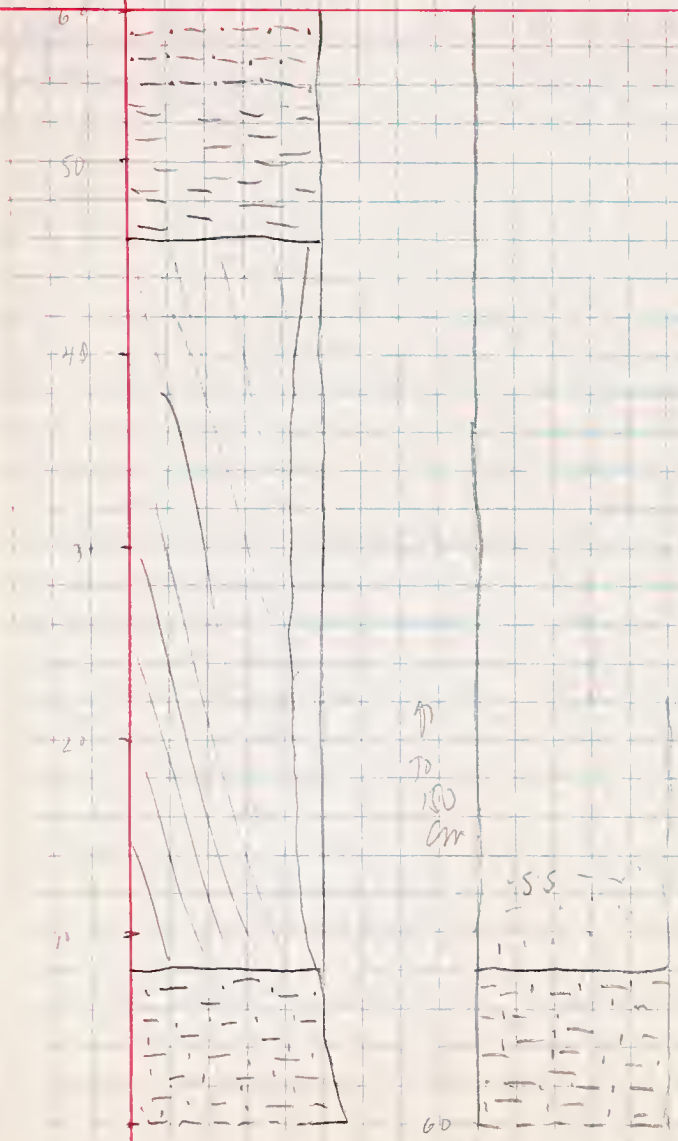
68 X Bedded f g. SS containing fossil floral

150 cm Top of meas. interval

19 ∀ Pollen samples at 10 cm intervals 0-60 cm

7/6/83

8322



7/6/83

8323 W of MANTUA QUARRY L. UTTER
at K/T CONTACT K. JOHNSON
LOC 8210 AGAIN.

NE1/4, NW1/4, SW1/4, Sec 31, T 57N, R 98W
Park Co, Wyo. [31] Denver Nos 7½'

Section across the K/T
Bdy sampled at 2 cm
intervals
STARTS in underclay of
lowest lignite
UNIT 1.6 L of Sec 8210

cm
Abt 1m. below leaves in pole slst
(1) 0 Section STARTS in undersoil
of lowest lignite

Medium grey, chippy slst
becomes sooty in upper
4 cm. Some roots &
disturbed bedding
Limonite staining on
joints & w vert roots

(2) 7.5 Lignite, BLACK
(3) 16 cm - Becomes silty

(4) 19 Mudst., grey, w vert &
horizontal roots
Limonite st. in joints
(Underclay) for Lignite above
Increasingly sooty in upper
2 cm

(5) 29 Lignite

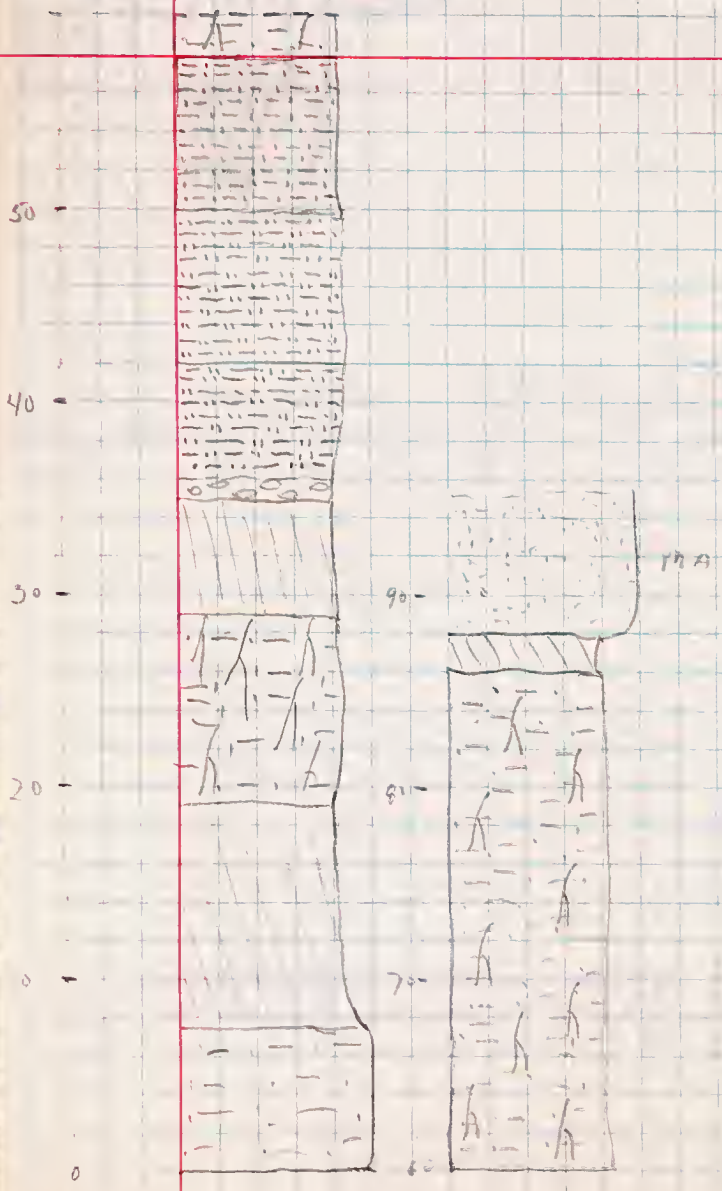
7/6/83

8323 (CONT.)

(6)	35	INTERBEDDED CLASTIC & LIGNITIC ROCK Beds of CLASTIC are PINKISH grey & CONTAIN flattened ovoid CLAY pellets between 35.2 & 36.0 STringers of lignite 1 TO 5 mm thick
(7)		36.3 LAMINATED SILTST ~~in~~ w/ irreg. LAMINATIONS pinkish grey w/ some COMMINUTED pl. frags Brownish grey
		~~top of Described SECTION~~
8	50	DARK grey laminated carb. MUDST
9	58	MUDST, MASSIVE w roots, grey w limonitic ST.
10	86	THIN LIGNITE BASE of MANTUA KENTI AT
11	88	88 cm TOP of MEAS SECTION

8323 (CONT.)

7/6/83



7/7/83

Virtue Gulch All locs. in SW 1/4, Sec 31, T8S, R21E, Carbon Co., Mont.

Virtue Gulch Red Lodge East Quad.

8324 SE 1/4 SW 1/4 Sec 31, T8S, R21E, Sfacing

(1) Hilltop ~~[illegible]~~ W

channel SS

levels are separate

not migration on

flood plain

sudden erosion

Slope above road to old Brophy mine.

8325 520 m E, 370 m N, SW Corner Sec 31, T8S, R21E

(2) Splay of SS in

pit. SS w shale

interbeds dec. shale to

north.

Levees fine upward.

Splays coarsen upward

in general

because progradational.

Cercidiphyllum genetrix

8326 450 m E, 220 m N, SW Corner Sec 31

(3) Splay in mine coarsens

upward 30' thick

flora in SS

Cercidiphyllum genetrix

Platanus raynoldsii

indet

7/7/83

Virtue Gulch locs. all in SW 1/4, Sec 31, T 7S R 21 E, Carbon Co, Mont.

8326 Cont.

Viburnum cupanioides

Vertical tree trunk

8327 340 m E, 330 m N, SW Corner, Sec 31

Sec 31

Flood plain or flood deposit mudst or shale

[illegible] to [illegible]

All bedded

One sway [illegible]

Pond sed.

Unios in mudst at base

paper [illegible] fossil leaf (psol)

Coal [illegible] 1' mudst 4' below ss bed

8328 100 m E, 420 m N, SW Corner, Sec 31

Channel w levee to west of

tree trunk

levee

[illegible] feet

7/7/83

Virtue Gulch locs. all in SW1/4 Sec 31, T8S, R21E, Carbon Co., MONT
Red Lodge EAST Quad.

8328 (CONT.) CONT. CONTINUED
good plant loc in
levee to rt of
channel

levee vfg SS
channel fg SS

splays vfg SS

8329 220m E, 320m N, SW Cor. Sec 31
6 #3 Coal 10' Thick
Sampled for Be^{10}
by Bob Giegengack
Amber - Can be fission track
dated.

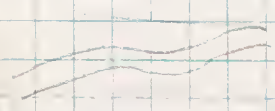
7/7/83

~~8330~~ Smith Mine Strip SW 1/4, Sec 6, T 8 S, R 21 E, Carbon Co., Mont

8330 500 m E, 250 m N, SW Cor., Sec 6

7 Channel cut on highwall of mine
isolated channels

possible epsilon x bedding



point bar

Levee
flood
plain

8331 580 m E, 300 m N, SW Cor., Sec 6

8. Channel w
Platanus nobilis in
middle
one piece [illegible] bed surface
N 45° W
Levees are not laterally
extensive here

7/8/83

Tour of Lacustrine facies and "Lebo" w
R. Yuretitch
J. Petersen
Mark.
Dale Springer
L. Utter
K. Johnson

Toured "Lebo" MSr by going up Hunt Cr. and looking at the escarpment of Lebo facing N into the valley. Ascending the escarpment between Hunt & Cub Creeks to look in detail at some of the sections.
Isolated SS channels were observed but these are broader and shallower than the deeply incised ones in the paludal facies at bear creek or in the lacustrine facies.
This coupled w/ the extensive soils development in the "Lebo" might be an indication of the slower sedimentation rate in the "Lebo".

7/9/83

8332 West slope of Lower Hollenbeck
8332 Draw, 950 m N, 400 m E, SE Cor.
Sec. 9, T9S R 22 E, Carbon Co.,
Mont. Hollenbeck Draw 7 1/2' Quad
Brown ss w contorted bedding
and casting of good 6
gastropods.

Would repay further collecting

Near loc. 8023

7/9/83

8333 700 m N, 110 m E, Sec 28, T 9 S, R. 22 E
8333 Carbon Co., Mont. Hollenbeck Draw Quad
Hollenbeck Draw
Old loc. 8026

about 4" above a lignite that underlies fossil pl. Beneath siltst. on the west slope of the draw about 18' above an old well platform.

Fish Scale

8334 Baseball Hill, 1030 m S, 320 m E, NW Cor., Sec 33, T 9 S, R 22 E, CARBON Co., MONT.

8334 Baseball Hill SW¼, Sec 34

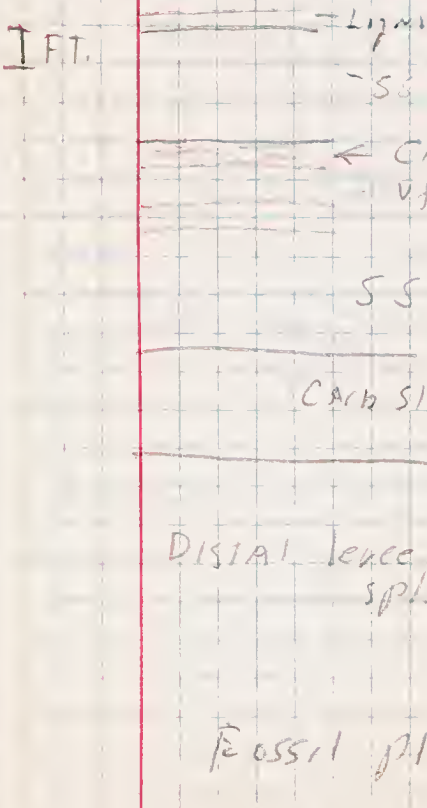
METALEPTOCONUS
Cercidiphyllum geometrix
Amber

Hollenbeck Draw Quad.

= Old Loc 8029.

7/9/83

8335 West Valley wall of Clarks Fork River
8335 500 m N, 180 m E, SW Cor. Sec 19,
T9S, R22E, Carbon Co., Mont.
Hollenbeck Draw 7½' Quad.
Fluvial facies.
Gastropods in carbonaceous,
laminated siltst cont. fossil pls.



7/9/83

8335 (cont'd.)

Betula?
Alnus
Sequoia langsdorfii
Glyptostrobus
Eucommia
Ginkgo
Cercidiphyllum
poss. Meliosma longifolia
Porosia verrucosa
unknown
Gastropods
Pelecy
Gavida

This loc. is a part of old loc. 7132.

7/12/83

8336 SW1/4, SE1/4, NE1/4, Sec 16, T56N, R.
- OLD 101 W, Park Co., Wyo. In
drainage of W. Fork of Sand Coulee.
w/ L. OTTEM, K. Johnson

1. SILTSTONE, carbonaceous

PLAT. NOD. 257

2. Cercid, gen. 323

Cercid fruit

4. Eucommia fruits

5. ? Acrocarpus cylindricus

6. Viburnum cerifolium

Viburnum antiquum

Glyptostrobus europaeus

Carya antiquorum

Sycamore leaves

Unknown w str. acuminate teeth

7/12/83

8336 (CONT.)

indet. lin. ent. lf. |||

ficus ovocuspoides ~~||||~~ ~~||||~~ |||

ribbed fruit ~~||||~~ ||

indet. hooked serrate |

17 Fraxinus eocenica ||||

13 Platanus wyomensis ~~||||~~ ||||

fossil bed 3' Thick.

7/12/83
L. UTTER

8339 NW 1/4, SE 1/4, Sec 22 T

130 m S, 500 m W, NE Cor. Sec. 22,
~~R23~~ T9S, R. 23 E. ~~Park Co.~~,
~~Wyo.~~ Carbon Co., MONT.
X bedded SS w/ Lenses of
Conglomerate
Containing Chert

SS is Ferruginous zw
cont. rat. to white,
massive white & other

8340 850 m S, 130 m W, NE Cor., Sec 22, T 9S
R 23 E ~~Park Co., Wyo~~
Carbon Co, MONT
305° Dip 12 N.

7/12/83
W. L. UTTER

3841 ON old moped TRAIL
~~at base~~ IN SHALES at base
of a prominent 20' THICK
Buff ss ledge

760 m S, 60 m W, NE Cor. Sec. 22,
T 9 S, R 23 E, ~~Park Co., Wyo~~
Carbon Co. MONT

Cerciidiphyllum
PLAT. RAYNOLDSII
Glypto

Come BACK A good loc

8342 580 m S, 120 m W, NE Cor. Sec. 22,
T 9 S, R 23 E, ~~Park Co., Wyo~~.
Ferrugineous wh. fr. water is
cores

Carbon Co., MONT

7/12/83
W. L. UTTER

8344 150 m S, 380 m W, NE Cor. Sec. 22,
T 9 S, R. 23 E., ~~Park Co., Wyo.~~
Carbon Co, Mont

Fluv. trans. to L&C
SS xbedded stay
rel. lent.
Fr. water ls. curls

8345 50 m N, 810 m W, SE Cor, Sec 15,
T 9 S, R 23 E, ~~Park Co., Wyo~~ Carbon Co
~~8345~~ 2 massive lignitic beds to 4'
and a chippy gray shale
capped by a 2' fr.
wh. is marker base of
Lacustrine

Mont

7/12/83

w/ L. Utter

8346 70 m N, 1310 m. W, SE Cor. Sec. 15,
T 9S, R. 23 E, ~~Park Co. Mont.~~
Carbon Co. Mont

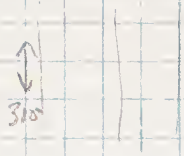
~~Base~~ top of [illegible]
on [illegible]
[illegible] ss
287 N 6°

7/13/83
W. L. Otter

8347 1430 m N, 160 m E, SW Cor. Sec 25
8347 (NW-NW) Sec 25, T 9 S, R 23 E, ~~Rock Co,~~
~~Wyo.~~ Carbon Co, Mont.

123° S 13°
on ripple marked ss
surface

Oscillation ripples
11 310° A2



7/13/83

W. L. UTTER

8348 NE1/4, SW1/4, SW1/4, SEC 25
T9S, R 23 E, ~~PARK~~ CARBON CO, ~~MONT~~ MONT
450 m N, 260 m E, SW Cor.
PLATAWUS NODULES in
f.g. ss x bedded ss.
Capping spur above
road.
LACUSTRINE facies.

8349. 400 m S, 1600 m E, NW Cor.,
SEC 36, T9S, R 23 E, CARBON Co.,
MONT.
Fresh water lm. w mollusk
shells
LAC.

138 SW 8°

7/13/03

8350 +70 m S, 20 m W
NW Cor Sec 31 L. UTTER
T9S, R 22 E, Carbon Co., Mont.

8350 1 SS below 18349
Below this
papery sh

Fossil pls in fissile
limy sh.

Glyptostrobus
Cercidiphyllum sp

7/14/83
W L. UTTER

8351 300m S, 630 m E, NW ~~X~~ Cor., Sec 28
T58N, R ~~108~~ W, PARK Co, WYO
NW 1/4 Sec 28

In thick lignite and chippy olive drab mudst. marking the trans. to the lake beds.
About 40' below the lake beds

Dip 40° W

ELK BASIN NW QUAD.

8552 HAWKS NEST POINT
370m S, 900m E, NW Cor. Sec 28, T58N ~~R 98E~~ R 100W
LACUSTRINE BEDS
50' above prominent yell SS ledge

Br. Shs + Lig Shs. Some poor plant frags.

IN Br. paper sh - 15' below Top of Hill
2nd lignitic sh down
Good fossil Pl. loc
Cercidiphyllum
Sorosia

Prim cards + duco cement to work

7/14

8353 NW NW Sec 27 T58N, R. 100W
Park Co. Wyo

320 m S, 140 m E, NW Cor Sec 27, T58N, R 100W, Park Co, Wyo.
Ripple bedded ferrug vfg SS ledge 3' thick about 30' above base of LAC

332° W 16° –

Oscillation ripple marks
Crest azimuth 46°
Asymm ripples 1320 Az.
of drift ⊥ to crest

20° set ripple drift 153°

Large gastropods.
8353

7/14/83
L. UTTER.

500 m S, 600 m W, NE Cor Sec 2,
8356 old 7830 T 57N, R 100 W,
Park Co, Wyo

327 W 16°

JUST below CONTACT w/
LAKE BEDS.

7/16/83
L. UTTER

8357 SW Sec. 2 T56N, R99W

Lebo w CArb SS [illegible]
[illegible]
SHALLOW SS holes of
SMALL CITES

PIS IN [illegible] [illegible] SS
[illegible]
Glyptostrobus

9[illegible] Petrified Forest floor

310° W 80° [illegible]
[illegible]

MAP of FOREST floor
w/ STANDING STUMPS
Some w/ Fallen [illegible]
trees

[illegible] SS
[illegible] p. 99 CX [illegible]
[illegible]

[illegible] 30 & 31 [illegible]

A

0358

@TRU

TRUE

25°

7/16/83

8:58

Shot is circa w. [illegible]
Strs [illegible] are [illegible]
filled [illegible] [illegible]

7/16/83

8359

NE, SE Sec 30

SS ledge w Cercidiphyllum
[illegible] wood x
very poorly preserved
large [illegible] [illegible]
DA =
about 15 feet across

IN Penkx SS also
a 3' diameter stump
[illegible]

8360

166 SW 30

Term Mitchell [illegible] of the Sun
[illegible] of [illegible]
[illegible] [illegible] [illegible]
Central [illegible] [illegible]

[illegible] a lateral transition
not a complete [illegible] [illegible]
[illegible] [illegible]

STUP 1 TO STUP 2

JACKSON ST. TERRAL

STUP 2 SOUT

AARON
TITLE AT

SECOND

STUP 2

STUP

STOP 5 Aquia
629 Under BFHD
11' 6" Clearence

STOP 6

Mrs Michelle Fortin
659-7570
Under Montapelier
Aquia Fm

PASSAPATANSY - well sorted Fg S.
Lodge at Jp Zone II
PISCATAWAY harbor poorly sorted
SS.

STOP 7 Belvidere Beach

Oliver Besler
Springfield
Cell. 569-3600

Ludwell Newton
775-2902

Schedule [illegible]

Pacific [illegible]

Turkish [illegible]

Circular [illegible]
Commun. in K
Extract. after
E. Wheeler
[illegible]
Rest. [illegible]

Road [illegible]

Stop [illegible]

AGREEMENT

In return for the privilege of ~~looking at the rocks~~ on the cliff and beach. on private property, I agree to adhere to all appropriate laws; to observe all safety precautions and practices; to use only areas designated by the landowner; to take every precaution against fire; and to assume all responsibility and liability for my person while on the landowner's property. I agree not to bring any unauthorized persons on the property with me. I also agree not to bring any dogs on the property at any time.

Signed: Leo J. Hickey

I hereby grant the person named above, access to Belvedere Beach Property as indicated above and subject to the terms of the agreement, on the following dates: for august 18. 1983.

Signed: Ludwell Newton
Caretaker of Belvedere Beach Property

and always call before coming down.

775. 2902.

T. W. Ward	U.S.G.S.	RESTON, VA.
S. L. Wing	U.S. G.S.	Washington, D.C.
N. O. Frederiksen	U.S.G.S.	Reston VA
M. Genadio	U.S.G.S.	Reston, VA

John Wilkes Booth was not shot near Pyas Creek but in Virginia near Port Royal.

Hi Phil,

Just stopped by looking for the lost ark. We are sorry not to find anyone

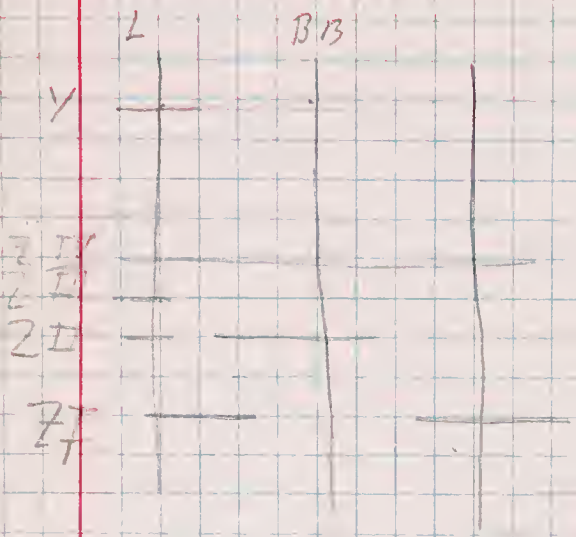
John Osborn has first
[illegible] for
Meeting on
Eurasian [illegible]
Lab Report

1st in Paris - 1972
2nd in Warsaw 1981

Red Wine in first

Dog [illegible]

July [illegible]


L
B B
Y
3 Y
4 D
2 D
7 T